



Learning Scenarios to improve **E**ducation for a **S**ustainable **C**onsumption

Teresa Lacerda

(teresalacerda@hotmail.com)

Agrupamento de Escolas de Póvoa de Lanhoso

Portugal





ESC, a global challenge



- **ESC = Education for a Sustainable Consumption**
- KA2 Erasmus + & eTwinning project
- **Start:** October 2014
- **End:** August 2017
- <https://twinspace.etwinning.net/1699/>





Who is ESC team?

- **7 schools / 7 countries:**

- Lycée Boisjoly-Potier, Le Tampon, Reunion Island, **France**
- I.I.S.S. Panetti Pitagora, Bari, **Italy**
- Béri Balogh Ádám Katolikus Gimnázium, Kollégium és Óvoda, Tamási, **Hungary**
- Agrupamento de Escolas de Póvoa de Lanhoso, **Portugal**
- Liceul Tehnologic “Sfantul Pantelimon”, Bucharest, **Romania**
- Instituto de Enseñanza Secundaria de Llerena, Llerena, **Spain**
- Şehit Ömer Halisdemir Anadolu Lisesi, Ankara, **Turkey**



Project aims

- This project looks to the future and to the following inspiring trends in the **21st century skills for life** and the targets for the European Union (EU) in **2020**:
 - [2]Climate change and **energy sustainability**.
 - [4]Fighting poverty and social exclusion.



Learning Scenarios

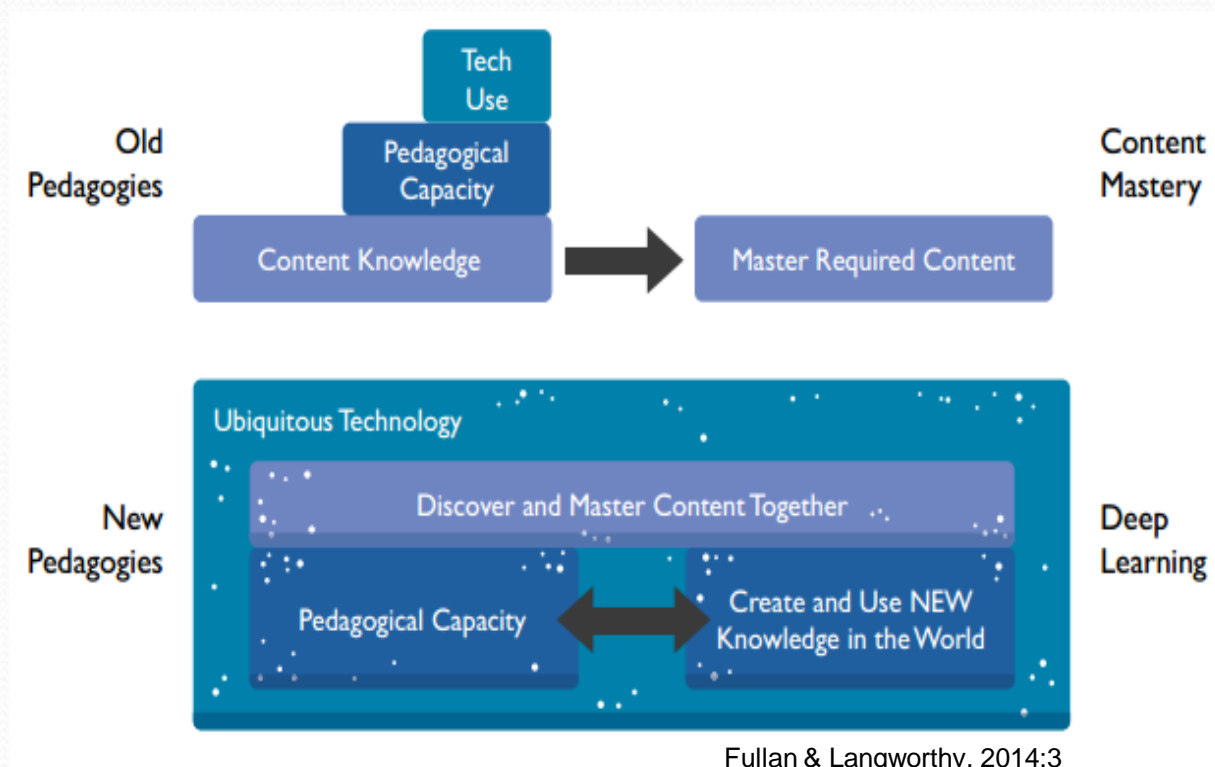


Learning Scenarios

- The **oldest students** create materials and plan activities to improve with **young students**.
- During the Learning, Teaching, Training activities (LTT) students **plan and divide the tasks**.
- In each country, students, divided in international groups, work in **collaboration**. They use usually:
 - Google Drive;
 - TwinSpace Forums.



Learning Scenarios – change the focus



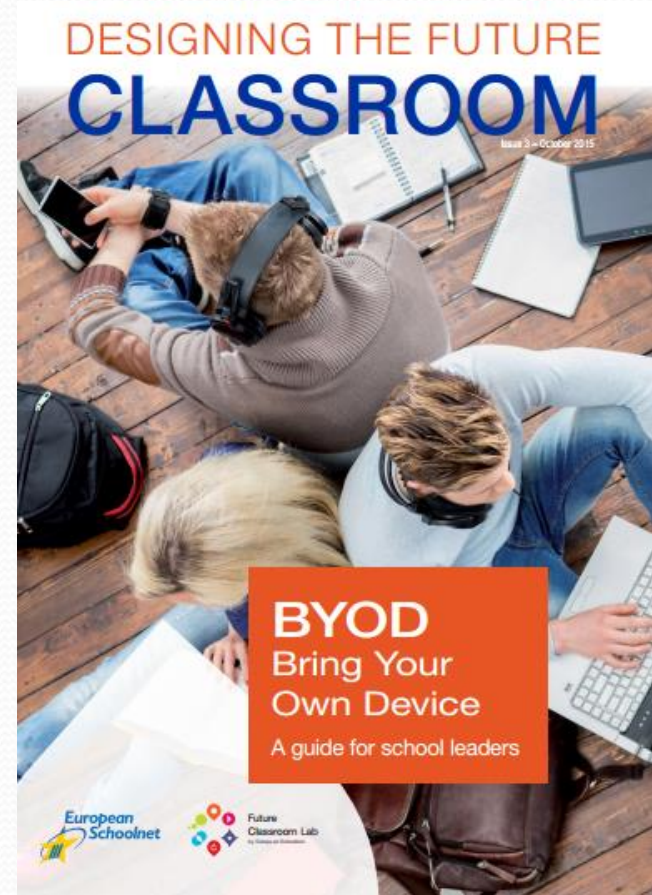
Fullan, M., & Langworthy, M. (2014). How New Pedagogies Find Deep Learning. Find Deep Learning, London: Pearson. In http://www.michaelfullan.ca/wp-content/uploads/2014/01/3897.Rich_Seam_web.pdf



Learning Scenarios — Process

- **Inspiration:**
 - BYOD
- **Challenge:**
 - Learning with peers
- **Steps:**
 - Research
 - Didactic resources production
 - Implementation
 - Share results

A sustainable usage of Energy



Attewell, J. (2015). BYOD - Bring Your Own Device. A guide for school leaders. Belgium: European Schoolnet.
In http://fcl.eun.org/documents/10180/624810/BYOD+report_Oct2015_final.pdf





Learning Scenarios – An example

Target students:

Primary school – fourth grade.

“Teachers”:

Biology students of the last year of secondary level.

Class Plan:

Summary, aims, methodology, didactic resources and evaluation.

A sustainable
usage of Energy



<http://bit.ly/LScomTIC>



Learning Scenarios – Didactic resources

REPÚBLICA PORTUGUESA
escola

Direção Geral de Estabelecimentos Escolares - D. G. E. S.
AGRUPAMENTO DE ESCOLAS DE POVOA DE LARINHOSO - 1900 15

A Energia – Atividades a realizar

GRUPO 1
Vais pesquisar informações e imagens sobre a **ENERGIA SOLAR** e, depois, vais colocar o mais interessante no Mural (QR Code abaixo). Para isso, segue as seguintes instruções:


1. Pesquisa informação sobre **energia solar** para encontrares respostas às seguintes perguntas:
 - a. O que é?
 - b. Qual a sua utilização?
 - c. Quais as vantagens da sua utilização? E as desvantagens?
2. Procura imagens sobre energia solar.
3. Coloca um resumo do que aprendeste, ilustrado com imagens, no Mural.
4. Vê o vídeo "A escola gasta muita energia elétrica?" e coloca no Mural um conselho para pouparmos energia em casa.

Vou pesquisar em...

1- Pesquisa informação sobre **energia solar** em:




2- Procura imagens em:



3- Vídeo "A escola gasta muita energia elétrica?"



4- Mural:



Education for Sustainable Consumption, a global challenge

Padlet in
https://padlet.com/catarina_afonsopeixoto/energiaebiave

EleKatch
 EleKatch Educativo
 PEGI 3
 Esta aplicação é compatível com o seu dispositivo.

Adicionar à Lista de desejos **Instalar**



Elekatch

Play Store

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Learning Scenarios – Implementation

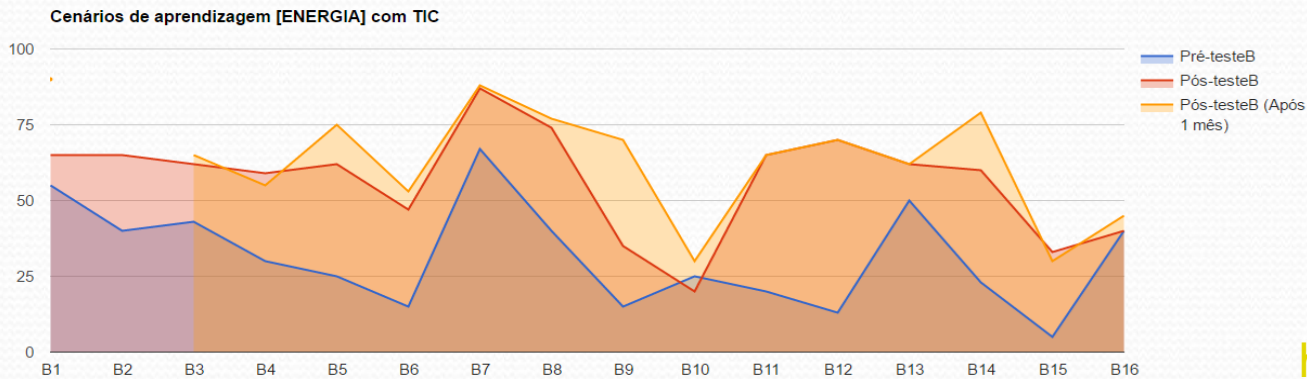




Learning Scenarios – Evaluation

- Kahoot - <https://play.kahoot.it/#/k/bf489afc-f13c-4cec-933b-fe1671856dcc>
- Plickers
- Written test – before and after the class about energy (immediately and one month after)

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<http://bit.ly/LScomTIC>



Learning Scenarios – other challenges

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With ICT
<http://bit.ly/LScomTIC>



Without ICT
<http://bit.ly/LSsemTIC>

Waste management



With ICT
<http://bit.ly/RSUcomTIC>



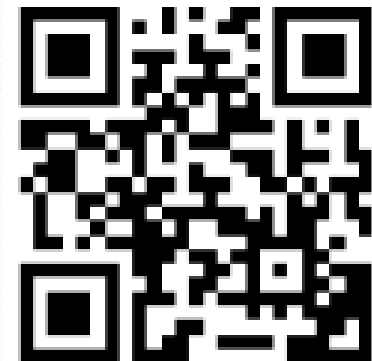
Without ICT
<http://bit.ly/RSUsemTIC>

The primary school students involved in the study answered a pre-test and a post-test and the **highest rate was observed among those who used the mobile devices.**

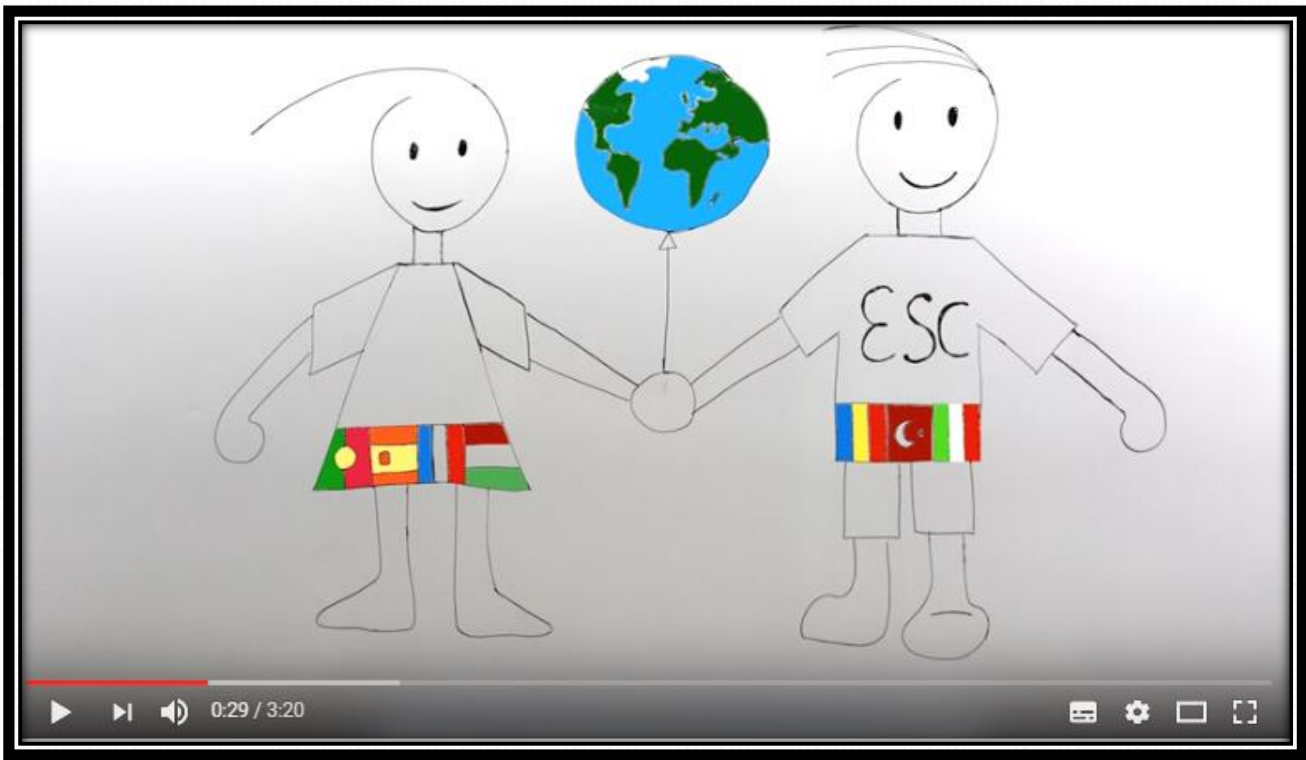


Learning Scenarios – Conclusion

- Learn in collaboration;
- Help young students to learn;
- Discuss about creative methodologies in classroom
- Prepare their future in University:
 - Plan work;
 - Make Scientific articles and posters;
 - Evaluate their own work;
- Develop an active citizenship.



<https://goo.gl/4nDoXo>



<https://youtu.be/xgJZ7SEOh58>

Thank you!



Teresa Lacerda
teresalacerda@hotmail.com